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MONTANA STATE DEPARTMENT OF HEALTH
Communicable Disease Notes and Comments
May 12, 1970

1970 - Week No. 18

Martin D. Skinner, M.D., Editor

Two additional cases of diphtheria from Big Horn County have been confirmed bacteriologically. An 11-year-old girl with minimal tonsillar exudates and an unknown immunization history gave her date of onset as April 30, 1970. She was treated and recovered satisfactorily; no apparent relationship to the two earlier cases could be established. The other (the fourth confirmed case) was a 5-year-old girl cousin of the first case (the 3-year-old boy reported last week); she had no history of immunization and displayed a reddened pharynx with minimal exudate on one tonsil. She gave her date of onset as May 1, 1970; she is recovering satisfactorily.

The isolates from all four cases appear to be gravis strains, unlike the intermedius strains, isolated from the earlier White Sulphur Springs and Missoula outbreaks. Intermedius strains are the most common type isolated from cases and carriers located in the northern parts of the U.S., with the vast majority of gravis and mitis strains coming from the southern and southeastern U.S. Our experience in Missoula and White Sulphur Springs would be consistent with the national patterns. In Big Horn County, the isolates of gravis strains from three unrelated cases suggests that these strains may be temporarily "endemic" or peculiar to that area. Isolates from that area over the past decade have been gravis or mitis, not intermedius, strains; this past experience tends to support that hypothesis.

No further cases have been identified since the fourth case on May 1, 1970, thus we are quite hopeful that no more cases are immediately forthcoming, and that the situation, in general, is well under control.

DEPRESSION OF TB SKIN TEST FOLLOWING MUMPS VACCINE

Your attention is directed to the article entitled "Depression of tuberculin delayed hypersensitivity by live attenuated mumps virus" by Kupers, et al, in the May, 1970, issue of The Journal of Pediatrics. They studied 26 children between the ages of three and ten, who had known positive TB skin tests and who had completed chemo therapy, or were under chemo therapy at the time of the study.

Mumps virus neutralizing antibody titers and intermediate-strength PPD skin tests were measured before and for several weeks following immunization with live attenuated mumps virus vaccine. Nine children initially had evidence of prior infection with mumps virus (immune) and seventeen had no such evidence (susceptible). Thirteen of seventeen susceptible children and four of the nine immune children had a 50%-or-greater reduction in the diameter of the skin test, one to four weeks following immunization. The proportions in the two groups were not significantly different. Unvaccinated controls were not included in the study, as past experience indicated that repeated PPD testing tended, if anything, to enhance, not suppress, the tuberculin reaction.

If confirmed by future studies, mumps virus vaccine then must be added to the list of infectious agents associated with depression of skin reactivity to tuberculin. Reports over the past 50 years have implicated such agents and diseases as: measles (rubeola), rubella, influenza, varicella, poliomyelitis, diphtheria, infectious mononucleosis, pertussis, typhus, scarlet fever, and immunization with attenuated measles virus, inactivated measles virus, polio virus vaccine (type 1), killed polio vaccine, and yellow fever virus. There is not total agreement that all these agents do depress tuberculin reactivity, what the mechanism might be, nor what relationship depression of tuberculin skin reactivity bears to active or reactivated tuberculosis.

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